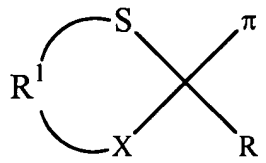
CLAIMS:

1-17 (Cancelled)

18. A functional polymer that is defined by the following formula:



where R is selected from C_1 to C_6 trialkyl-silyl groups, C_1 to C_{20} alkyl groups, C_4 to C_{20} cycloalkyl groups, C_6 to C_{20} aryl groups, thienyl, furyl, and pyridyl groups; and R may optionally have attached thereto any of the following functional groups: C_1 to C_{10} alkyl groups, C_6 to C_{20} aryl groups, C_2 to C_{10} alkenyl groups, C_3 to C_{10} non-terminal alkynyl groups, ethers, *tert*-amines, oxazolines, thiazolines, phosphines, sulfides, silyls, and mixtures thereof; where R^1 is selected from C_2 to C_8 alkylene groups, where X is sulfur, and where π is a polymer chain.

19. The polymer of claim 18, where said polymer chain derives from the anionic polymerization of monomer including conjugated dienes and optionally vinyl aromatics.

20. The polymer of claim 18, where said polymer chain includes poly(styrene-*co*-butadiene).

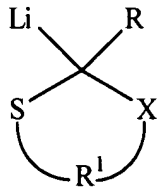
21. The polymer of claim 18, where said polymer chain includes a terminal functional group that includes a trialkyltin group, a thiazoline group, a trialkoxysilane group, or a carboxamide group.

22. The polymer of claim 18, where said polymer chain includes a terminal group resulting from the termination of said polymer chain with a reagent selected from the group consisting of tin tetrachloride, tributyltin chloride, dibutyltin chloride, tetraethylorthosilicate, 1,3-dimethyl-2-imidazolidinone, and mixtures thereof.

23. The polymer of claim 18, where R includes a C_6 to C_{20} aryl group having attached thereto a *tert*-amine group.

24. A method for preparing a functional polymer, the method comprising:

contacting monomer including conjugated dienes with a sulfur-containing initiator to form a living polymer, where the initiator is defined by the formula



where R is selected from C_1 to C_6 trialkyl-silyl groups, C_1 to C_{20} alkyl groups, C_4 to C_{20} cycloalkyl groups, C_6 to C_{20} aryl groups, thienyl, furyl, and pyridyl groups; and R may optionally have attached thereto any of the following functional groups: C_1 to C_{10} alkyl groups, C_6 to C_{20} aryl groups, C_2 to C_{10} alkenyl groups, C_3 to C_{10} alkynyl groups, ethers, *tert*-amines, oxazolines, thiazolines, phosphines, sulfides, silyls, and mixtures thereof; where R^1 is selected from C_2 to C_8 alkylene groups, and where X is sulfur.

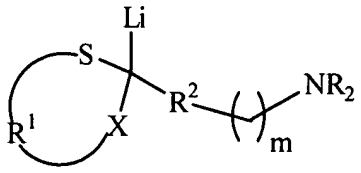
25. The method of claim 24, where the monomer includes conjugated dienes and optionally vinyl aromatics.

26. The method of claim 25, where said step of contacting takes place in a solvent.

27. The method of claim 26, further comprising contacting the living polymer with a terminating agent, a coupling agent, or a linking agent.

28. The method of claim 27, where the terminating agent is selected from the group consisting of tin tetrachloride, tributyltin chloride, dibutyltin chloride, tetraethylorthosilicate, 1,3-dimethyl-2-imidazolidinone, and mixtures thereof.

29. The method of claim 24, where the sulfur-containing initiator is defined by the formula



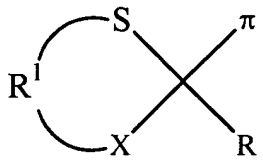
where R is selected form the group consisting of C_1 to C_6 Trialkyl-silyl groups, C_1 to C_{20} alkyl groups, C_4 to C_{20} cycloalkyl groups, C_6 to C_{20} aryl groups, thienyl, furyl, and pyridyl groups; where

R^1 is selected form the group consisting of C_2 to C_8 alkylene groups; where R^2 is selected from the group consisting of C_1 to C_8 alkylene groups, C_3 to C_{12} cycloalkylene groups and C_6 to C_{18} arylene groups; where m is 0 to about 8, and where X is sulfur.

30. The method of claim 24, wherein the initiator is selected from the group consisting of 2-lithio-2-methyl-1,3-dithiane, 2-lithio-2-phenyl-1,3-dithiane, 2-lithio-2-(4-dimethylamino)phenyl-1,3-dithiane, 2-lithio-2-trimethylsilyl-1,3-dithiane, and initiators selected from the group consisting of 2-lithio-2-phenyl-1,3-dithiane, 2-lithio-2-(4-dimethylaminophenyl)-1,3-dithiane, and 2-lithio-2-(4-dibutylaminophenyl)-1,3-dithiane.

31. A vulcanized rubber composition comprising:

the vulcanization product of a functional polymer, where the functional polymer is defined by the formula



where R is selected from C_1 to C_6 trialkyl-silyl groups, C_1 to C_{20} alkyl groups, C_4 to C_{20} cycloalkyl groups, C_6 to C_{20} aryl groups, thienyl, furyl, and pyridyl groups; and R may optionally have attached thereto any of the following functional groups: C_1 to C_{10} alkyl groups, C_6 to C_{20} aryl groups, C_2 to C_{10} alkenyl groups, C_3 to C_{10} non-terminal alkynyl groups, ethers, *tert*-amines, oxazolines, thiazolines, phosphines, sulfides, silyls, and mixtures thereof; where R^1 is selected from C_2 to C_8 alkylene groups, where X is sulfur, and where π is a polymer chain.

32. The vulcanized rubber of claim 31, where said polymer chain derives from the anionic polymerization of monomer including conjugated dienes and optionally vinyl aromatics.

33. The vulcanized rubber of claim 31, where said polymer chain includes a terminal functional group that includes a trialkyltin group, a thiazoline group, a trialkoxysilane group, or a carboxamide group.

34. The vulcanized rubber of claim 31, where said polymer chain includes a terminal group resulting from the termination of said polymer chain with a reagent selected from the group consisting of tin tetrachloride, tributyltin chloride, dibutyltin chloride, tetraethylorthosilicate, 1,3-dimethyl-2-imidazolidinone, and mixtures thereof.

35. The vulcanized rubber of claim 31, where the rubber composition further comprises a filler selected form the group consisting of carbon black, silica, starch, aluminum hydroxide, magnesium hydroxide, clays, and mixtures thereof.

36. The vulcanized rubber of claim 32, where R includes a C_6 to C_{20} aryl group having attached thereto a *tert*-amine group.

37. A tire component comprising the rubber composition of claims 33.